

Remarks

Applicants respectfully request reconsideration of the present U.S. Patent application as amended herein. No claims have been amended, added or canceled. Thus, claims 1-37 are pending.

CLAIM REJECTIONS - 35 U.S.C. § 103(a)

Claims 1-37 were rejected as being unpatentable over U.S. Patent No. 5,539,466 issued to Igarashi, et al. (*Igarashi*) in view of U.S. Patent No. 5,801,778 issued to Ju (*Ju*). For at least the reasons set forth below, Applicants submit that claims 1-37 are not rendered obvious by *Igarashi* and *Ju*.

Claim 1 recites:

utilizing even-parity field prediction to unidirectionally predict content of each of a plurality of fields of the predicted frame from corresponding fields of only the temporally closest anchor frame, wherein the unidirectionally predicted frame comprises a frame that is defined as a bi-directionally predicted frame according to an encoding protocol for the stream of data.

Thus, Applicants claim using unidirectional prediction to predict the contents of a frame that is *defined as a bi-directionally predicted frame by the encoding protocol* being used for the stream of data.

Applicants agree with the Office Action that *Igarashi* specifically lacks any suggestion of using unidirectional prediction to predict contents of a frame that is defined as a bi-directionally predicted frame. *Ju* is cited to cure this deficiency. However, *Ju* merely discloses encoding of frames as set forth in the MPEG standards. See col. 2, lines 18-50. That is, *Ju* discloses encoding on a macroblock-by-macroblock basis. See col. 2,

lines 39-41. Specifically, *Ju* does not disclose “utilizing even-parity field prediction to unidirectionally predict content of *each* of a plurality of fields of the predicted frame.”

Therefore, no combination of *Igarashi* and *Ju* can teach or suggest the invention as claimed in claim 1.

Claims 2-11, 31, 32 and 33 depend from claim 1. Because dependent claims include the limitations of the claims from which they depend, Applicants submit that claims 2-11, 31, 32 and 33 are not rendered obvious by *Igarashi* and *Ju* for at least the reasons set forth above.

Claim 12 recites:

a motion estimation circuit to receive a stream of data comprising at least an anchor frame and a predicted frame, and to utilize even-parity field prediction to unidirectionally predict content of each of a plurality of fields of the predicted frame from corresponding fields of only a temporally closest anchor frame in the stream of data, ***wherein the unidirectionally predicted frame comprises a frame that is defined as a bi-directionally predicted frame according to an encoding protocol for the stream of data.***

Thus, Applicants claim a motion estimation circuit that performs field prediction to unidirectionally predict a frame that is defined as a bi-directionally predicted frame according to the encoding protocol used.

As discussed above, *Igarashi* and *Ju* disclose conventional frame prediction and motion compensation. Therefore, no combination of *Igarashi* and *Ju* can disclose a motion estimation circuit as claimed in claim 12.

Claims 13-17, 34 and 35 depend from claim 12. Because dependent claims include the limitations of the claims from which they depend, Applicants submit that

claims 13-17, 34 and 35 are not anticipated by *Igarashi* for at least the reasons set forth above.

Claim 18 recites:

A storage medium comprising a plurality of executable instructions which, when executed, causes an executing processor to implement a motion estimation function to utilize even-parity field prediction to unidirectionally predict content of each of a plurality of fields of a predicted frame from corresponding fields of only a temporally closest anchor frame, ***wherein the unidirectionally predicted frame comprises a frame that is defined as a bi-directionally predicted frame according to an encoding protocol for the stream of data.***

Thus, Applicants claim a storage medium having instructions to implement motion estimation that performs field prediction to unidirectionally predict a frame that is defined as a bi-directionally predicted frame according to the encoding protocol used. Claims 19, 36 and 37 depend from claim 18.

As discussed above, *Igarashi* and *Ju* disclose conventional frame prediction and motion compensation. Therefore, *Igarashi* and *Ju* do not disclose a storage medium having instructions to implement motion estimation as claimed in claims 18, 19, 36 and 37.

Claim 20 recites:

predicting, unidirectionally, content of each of a plurality of fields in non-reference frames and select reference frames using information contained in merely corresponding fields of a single past or subsequent, temporally closest, reference frame, ***wherein the unidirectionally predicted non-reference frames comprise a frame that is defined as a bi-directionally predicted frame according to an encoding protocol for the stream of data.***

Thus, Applicants claim motion estimation that performs field prediction to unidirectionally predict a frame that is defined as a bi-directionally predicted frame

according to the encoding protocol used. Claim 30 is directed to a storage medium comprising a plurality of executable instructions which, when executed by a computing system, cause the computing system to implement a method according to claim 20.

As discussed above, *Igarashi* and *Ju* disclose conventional frame prediction and motion compensation. Therefore, *Igarashi* and *Ju* do not disclose a motion estimation circuit as claimed in claims 20 and 30.


Claims 21-29 depend from claim 20. Because dependent claims include the limitations of the claims from which they depend, Applicants submit that claims 21-29 are not anticipated by *Ueda* for at least the reasons set forth above.

CONCLUSION

For at least the foregoing reasons, Applicants submit that the rejections have been overcome. Therefore, claims 1-37 are in condition for allowance and such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application. Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN, LLP

Date: FEB 21, 2006


Paul A. Mendonsa
Reg. No. 42,879

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, CA 90025-1026
(503) 439-8778